

Remarks/Arguments

The Office Action mailed May 8, 2007 has been reviewed and carefully considered.

Claims 14 and 15 have been canceled without prejudice. Claims 1, 3, 4, 11 and 13 have been amended. Claims 1-13 are now pending in this application.

Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested. It should be noted that the applicants are not conceding in this application that the amended claims in their prior form are not patentable over the art cited by the examiner, as the present claim amendments have been made only to facilitate expeditious prosecution of the application. The applicants respectfully reserve the right to pursue these and other claims in one or more continuations and/or divisional patent applications.

The Abstract stands objected to because it contains the word "means" therein. The Abstract has been amended in a way believed to overcome the objection.

Claims 14 and 15 stand objected to under 37 CFR 1.75(c), as being in improper dependent form for failing to further limit the subject matter of a previous claim. Claims 14 and 15 have been canceled without prejudice.

Claims 1, 4, 11 and 13 stand objected to for including various informalities. The claims have been amended in a way believed to overcome the objection.

Claims 3, 4 and 11 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

which the applicants regard as the invention. Claims 3 and 4 have been amended in a way believed to overcome the rejection.

Regarding claim 11, the examiner states that the claim appears to be mis-descriptive because the examiner asserts that the specification does not disclose an inductor provided in the external starter circuit, citing p. 11, line 10 and Fig. 2. The applicants note that the feature of providing an inductance in both the ballast circuit and the external starter circuit is disclosed at least at p. 12, lines 17-20 of the Specification. Accordingly, withdrawal of the rejection on this particular ground is respectfully requested.

Claims 1, 2 and 4-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cohen et al. (U.S. Patent No. 4,163,176) (hereinafter 'Cohen') in view of Otsuka et al. (U.S. Patent No. 3,780,329) (hereinafter 'Otsuka').

Cohen discloses a discharge lamp comprising an extended base including impedance means for reducing current through the lamp (Cohen, Abstract). In addition, the lamp of Cohen has a shorter discharge vessel than a standard lamp but has the same total length as a standard lamp due to the extended base (Cohen, Abstract).

Otsuka discloses a discharge lamp having a filling gas comprising mercury and 80% or 65% composition of Krypton (Otsuka, column 1, line 20; Abstract). Otsuka also discloses the filling pressure of the lamp's discharge vessel as being between 1.0 mmHg (130 Pa) to 3.5 mmHg (470 Pa) (Otsuka, column 2, lines 8-9).

However, Cohen and Otsuka, taken singly or in any combination, do not disclose or suggest a lamp having a filling pressure above 100,000 Pa. Cohen discloses a discharge vessel with a filling pressure of 4 torr (530 Pa) (Cohen, column 1, line 50).

Moreover, as stated above, Otsuka discloses the pressure within the discharge vessel as being 130 Pa to 470 Pa.

Nowhere does Cohen and/or Otsuka, taken singly or in combination, even remotely suggest increasing the filling pressure by approximately 200 times the amount disclosed. The filling pressure of the discharge vessels described in the references is on the order of a few hundred Pascal, essentially approaching the pressure of a vacuum. One of ordinary skill in the art would not vary the pressure to at least 100,000 Pa through routine experimentation. In addition, increasing the filling pressure to 100,000 Pa results in a high wattage consumption, thereby reducing the efficiency lamp (Specification, p. 3, lines 31-32). Accordingly, it would not be obvious to one of ordinary skill in the art to increase the filling pressure to at least 100,000 Pa.

The present principles, however, include a method of offsetting disadvantages related to a filling pressure above 100,000 Pa in a gas discharge lamp. Specifically, the present principles include an optimization of the interrelationship between the filling pressure, the composition of the filling gas, and the inductance of the lamp circuit, resulting in a power-efficient gas discharge lamp having a pressure above 100,000 Pa (Specification, p. 3, line 26-29; p. 3, line 34 to p. 4, line 4). Cohen and/or Otsuka, taken singly or in combination, fail to even remotely suggest such an optimization.

Accordingly, the present principles are believed to be patentably distinguished from the references, as a gas discharge lamp having a filling pressure above 100,000 Pa is not rendered obvious.

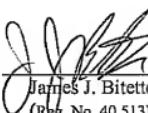
Claim 1 includes, inter alia: “. . . low-pressure mercury vapor discharge lamp comprising: a light-transmitting discharge vessel . . . the gas pressure in the discharge vessel (10) being greater than 1·10⁵ Pa.”

Thus, claim 1 is believed to be patentable over Cohen and Otsuka, taken singly or in combination, at least because the references do not disclose or suggest a gas discharge lamp with a filling pressure above 100,000 Pa. In addition, claims 2-13 are believed to be patentable due at least to their dependencies from claim 1.

In view of the foregoing, the applicants respectfully request that the rejections of the claims set forth in the Office Action of May 8, 2007 be withdrawn, that pending claims 1-13 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's representatives Deposit Account No. 50-1433.

Respectfully submitted,

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